Results: 40 patients were recruited (mean age 49.7; 62% female). Compliance with daily diary completion was 97%. Symptom scores remained stable for 14 days pretreatment and symptom score fell by 80% post GSV closure. ES (mean change/SD) and correlations with other instruments are shown in Table.

Conclusions: VVSymQ™ is a simple patient-centered measure that can be administered daily via a PDA with very high compliance. It is sensitive to clinically important symptom improvements following GSV closure and correlates with existing instruments.

ES and correlation between instruments pre and post GSV closure

Table.

	VVSymQ	*PA-V3*	*VCSS*	*VEINES-QoL*	*CIVIQ-20*
Effect size (ES)	2.0 (paper) 1.6 (electronic)	1.5	3.4	1.8	1.2
Correlation pre-GSV closure	–	0.318[a]	NS	0.727[c]	0.518[c]
Correlation 8 week post-GSV closure	–	NS	0.456[b]	0.755[c]	0.587[c]

[a] $P \leq .05$;
[b] $P \leq .01$;
[c] $P \leq .001$; NS=not significant

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PS150.

Saphenous Vein Recanalization after Radiofrequency Ablation: Incidence and Associated Risk Factors

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Objectives: Endovenous ablation of the great and small saphenous veins has become the standard surgical therapy for the treatment of chronic venous insufficiency (CVI). Vein recanalization following radiofrequency ablation (RFA) has been described. This study reviewed the incidence of and risk factors for developing recanalization after successful ablation.

Methods: This two-center retrospective study reviewed 249 limbs that underwent RFA of either the great (GSV) or small saphenous vein (SSV) over a three-year period, and for which an intermediate duplex ultrasound was available. All cases of saphenous recanalization (N=16, 6.4%), were identified and the associated patient data, including comorbidities and need for additional interventions, were analyzed.

Results: Seventeen limbs demonstrated either segmental (9, 53%) or complete (8, 47%) recanalization of the GSV after initial successful ablation. Recanalization was associated with higher rate of symptom recurrence (41% v 21%, RR 2.75, 95% CI, 0.99-7.6) and need for a second vein procedure in the affected limb (35% v 12%, RR 3.96, 95% CI 1.3-11.7). Two GSVs required a second endovenous ablation for persistent venous ulcers. Concomitant diabetes, hyperlipidemia, anticoagulation use, antiplatelet use, presence of deep reflux, or tobacco use did not increase the risk of recanalization. Comparatively, patients with GSV recanalization had a longer mean follow-up (63.3 v. 41.6 weeks) but no difference in disease severity (C4, 35% v. 17%; C5, 18% v. 15%; C6, 6% v. 8%, NS).

Conclusions: GSV recanalization following RFA for the treatment of CVI appears to be a sporadic phenomenon without clearly associated risk factors. Recanalization, although often involving an isolated segment of the great saphenous vein, is associated with a two-fold increase in symptom recurrence and the need for interval vein procedures. Follow-up ultrasound interrogation is recommended especially in patients with persistent or recurrent symptoms or ulceration.

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PS152.

Calf Deep Vein Thrombosis: Current Trends in Management

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Objectives: Deep vein thrombosis (DVT) involving calf veins is relatively common condition with an incidence of almost 2% in the general population. Despite this high incidence there is lack of consensus regarding appropriate management of the condition borne primarily from paucity of evidence. Our objective as a prelude to a larger randomized trial was to review current management practices by means of a national survey.

Methods: The survey was conducted among vascular specialists who routinely manage patients with calf DVT. This was done by means of a 19 point questionnaire. The 110 responses accrued were collated and analyzed to ascertain practice patterns.

Results: Of the 110 practitioners 68 (62%) were Vascular Surgeons. Amongst the responders, while 93 (85%) would anticoagulate for axial calf vein DVT, only 60 (55%) would anticoagulate for muscular calf vein DVT. Of those practitioners anticoagulating for calf DVT 60% would fol-

low patients with duplex surveillance compared to 70% in the no anticoagulation group. There was significant variation in timing and duration of duplex surveillance for those not anticoagulated (Day 3 to day 14). Among those who used duplex surveillance only 47% had a protocol for surveillance. Safety of anticoagulation, risk of development of post thrombotic syndrome and quality of life were the key criteria that factored into prescription of anticoagulation. Majority of respondents felt that use of anticoagulation could prevent progression of calf vein DVT. 79% of respondents felt that appropriateness of anticoagulation for calf DVT needed to be addressed with a well designed trial.

Conclusions: Currently there does not appear to be consensus regarding the role of anticoagulation following diagnosis of calf deep vein thrombosis. Additionally, the ideal pattern of surveillance following diagnosis of DVT also needs to be clarified. These are questions best answered by a well designed randomized trial.

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PS154.

Trends in Outpatient Treatment of Vascular Diseases

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Objectives: Recent trends for increase in inpatient vascular surgery (IP) are well documented. In this study we review utilization and procedural shifts for outpatient vascular procedures (OP) for which there are little data.

Methods: The National Survey of Ambulatory Surgery database was used to determine nationwide rates of OP for years 1994-1996, and 2006; the National Inpatient Sample was used for IP. States CA, FL, NY and MD provided both IP and OP data, and were used as a representative sample of the nation for 2006-2009. CPT and ICD9 codes were divided into procedure groups and used to query the databases. Trends were analyzed using interrupted time series.

Results: Between 1994 and 2009 the rate of OP increased 250%, from 93.3 to 326.9 per 100,000 capita. Aging population accounted for 39% of the increase. Growth in OP outpaced IP, accounting for 15.8% of all interventions in 1994 and 32.3% in 2009. Patients 65 years and older had the greatest increase, and men had higher rates than women. Of the procedure groups, revascularization, imaging and arteriovenous access had the largest percent increase; rates of venous , skin graft and minor amputation procedures were stable (Table).

Conclusions: Vascular surgeries are increasingly performed as outpatient operations, both in absolute number and as a percent of the total. Possible causes include an increase in the prevalence of relevant risk factors, newer technologies, proliferation of freestanding surgical units and reimbursement policies.

Table. Trends in the utilization of specific outpatient surgery groups

	NSAS No data post-2006		*Combined states*		
	Procedures per 100000		*Procedures per 100000*		*Percent change*
	1994	*2006*	*2006*	*2009*	
Revascularization	7.75	36.28	38.79	50.06	545.58%
AV access	11.11	44.48	46.85	52.97	376.78%
Imaging	26.73	86.44	75.88	91.50	242.37%
Venous procedures	17.99	32.46	26.64	26.32	46.29%
Minor amputation	2.85	7.14	3.40	3.63	27.18%
Skin graft	2.90	3.67	2.52	2.80	-3.68%

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PS156.

Surgical Managment of Infected Femoral Artery Pseudaneursms: A Contemporary Series

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Objectives: Infected femoral artery pseudoaneurysms (IFAPs) are a significant surgical challenge and can lead to life-threatening hemorrhage or limb loss in a primarily young population.

Methods: A retrospective review of patients who presented with IFAPs between 1997 and 2010. Demographics, initial presentation, pre-operative imaging, surgical intervention, and outcome data were recorded.

Results: Fifty cases were treated during the study period. The majority were male (72%), with median age of 37 years old (range 21-63). Black tar heroin injection was the most common etiology (84%), followed by access site pseudoaneurysms (10%). Common femoral artery ligation was performed in 42 cases (84%) with preservation of the femoral bifurcation in 28 cases (56%). Vascular control was accomplished by proximal occlusion of the ipsilateral external iliac artery via a retroperitoneal incision in 24% of the cases or by selective cannulation of the ipsilateral external iliac artery from a contralateral percutaneous common femoral artery approach and placement of a compliant occlusion balloon (14%). In the remainder of